

FIG. 1

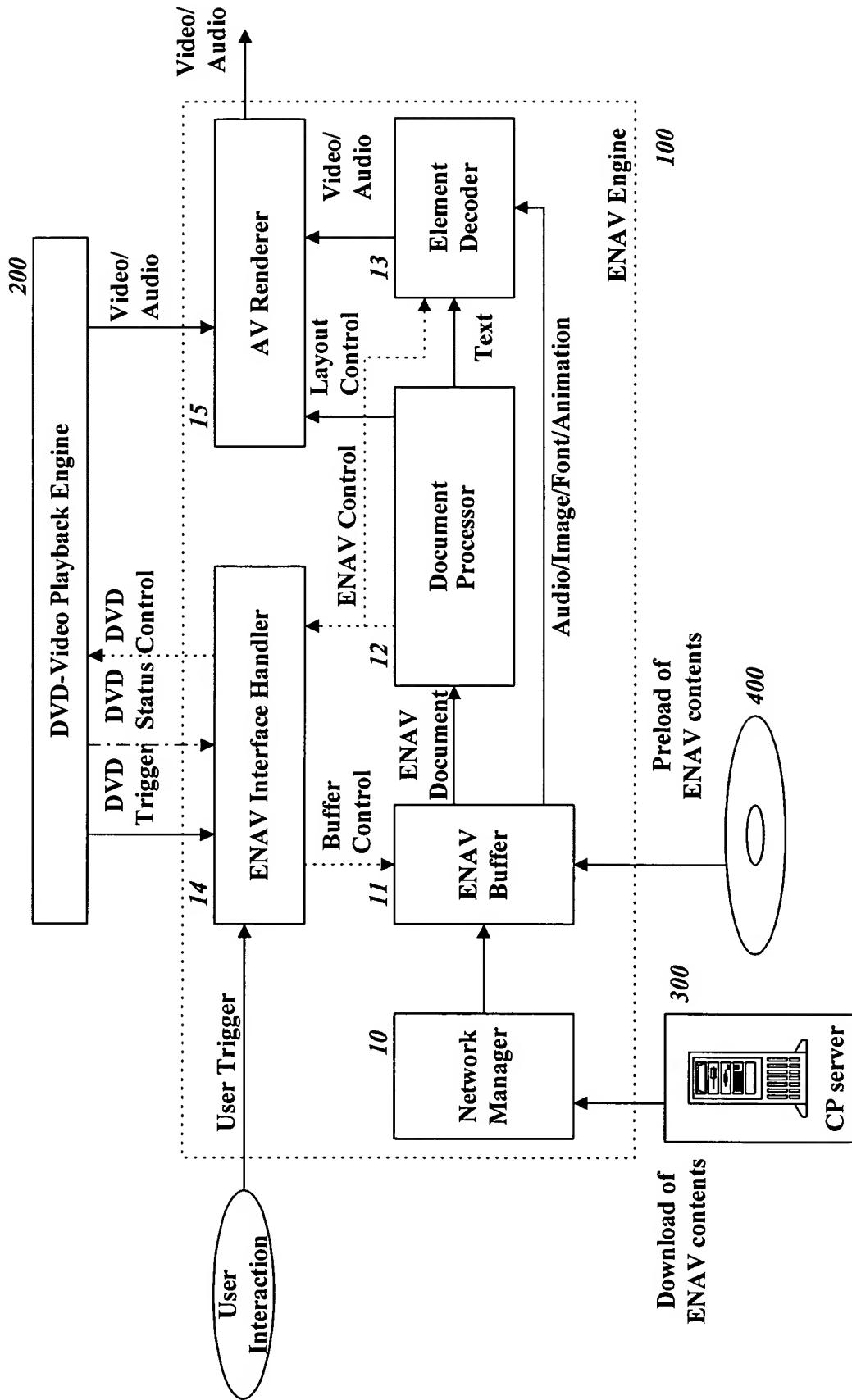


FIG. 2

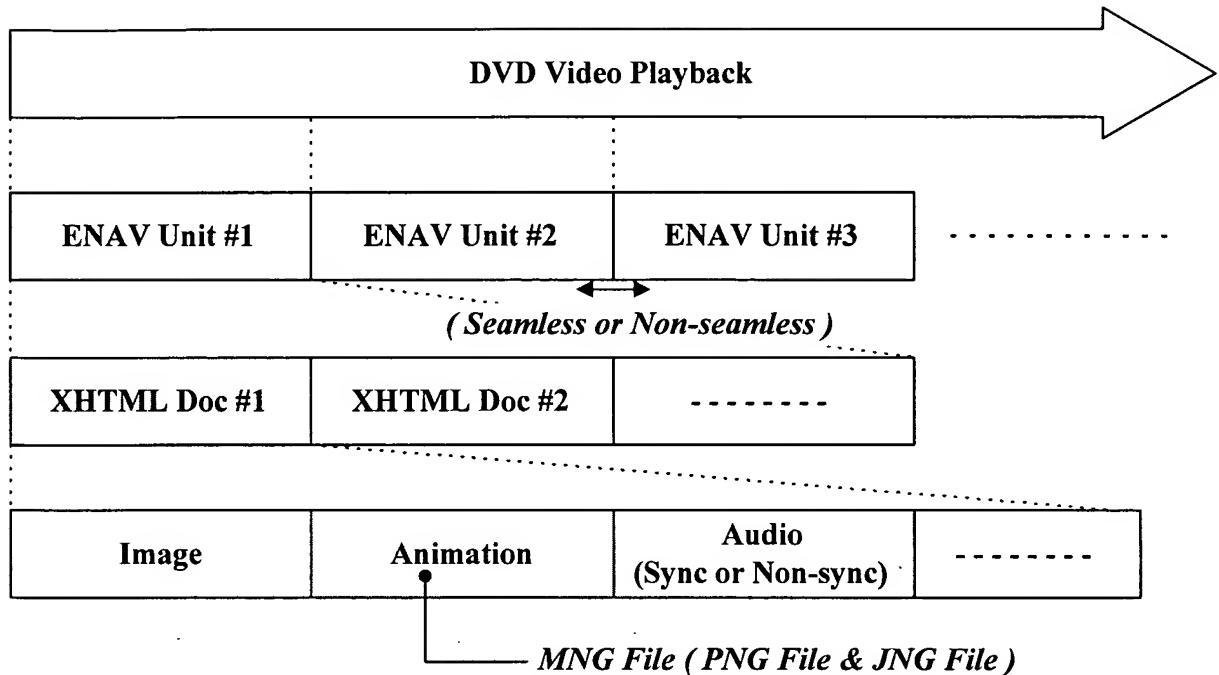


FIG. 3

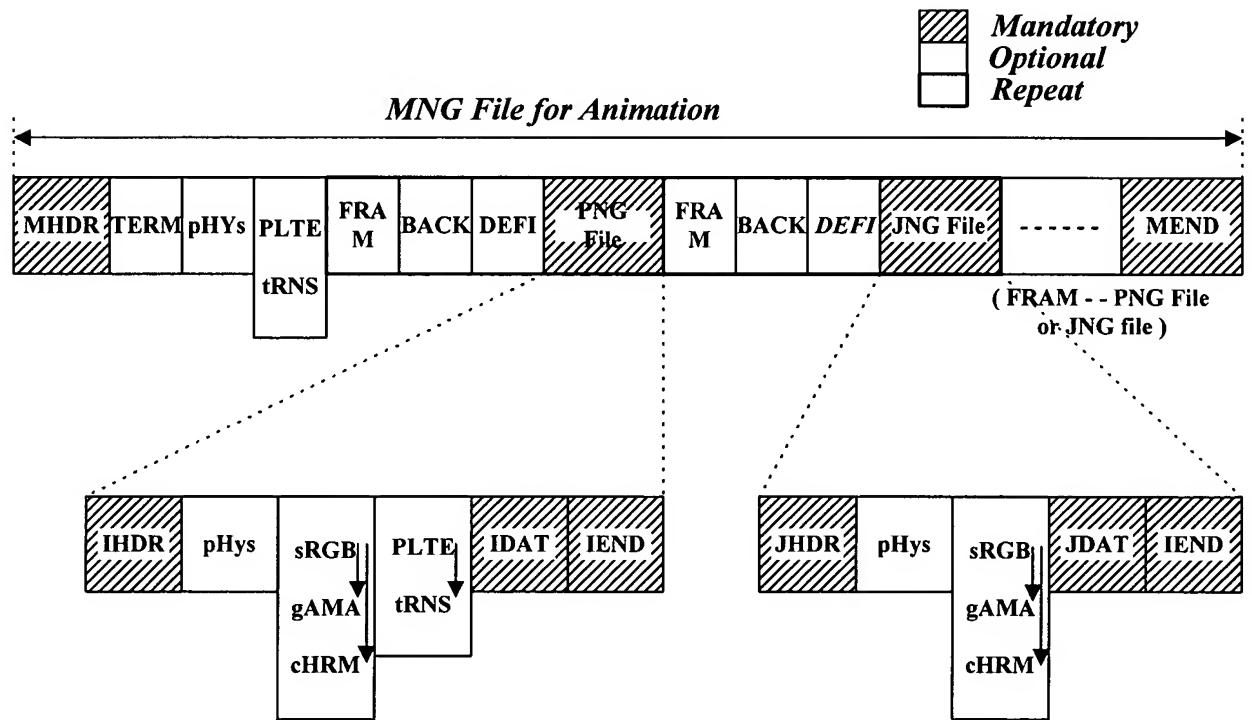
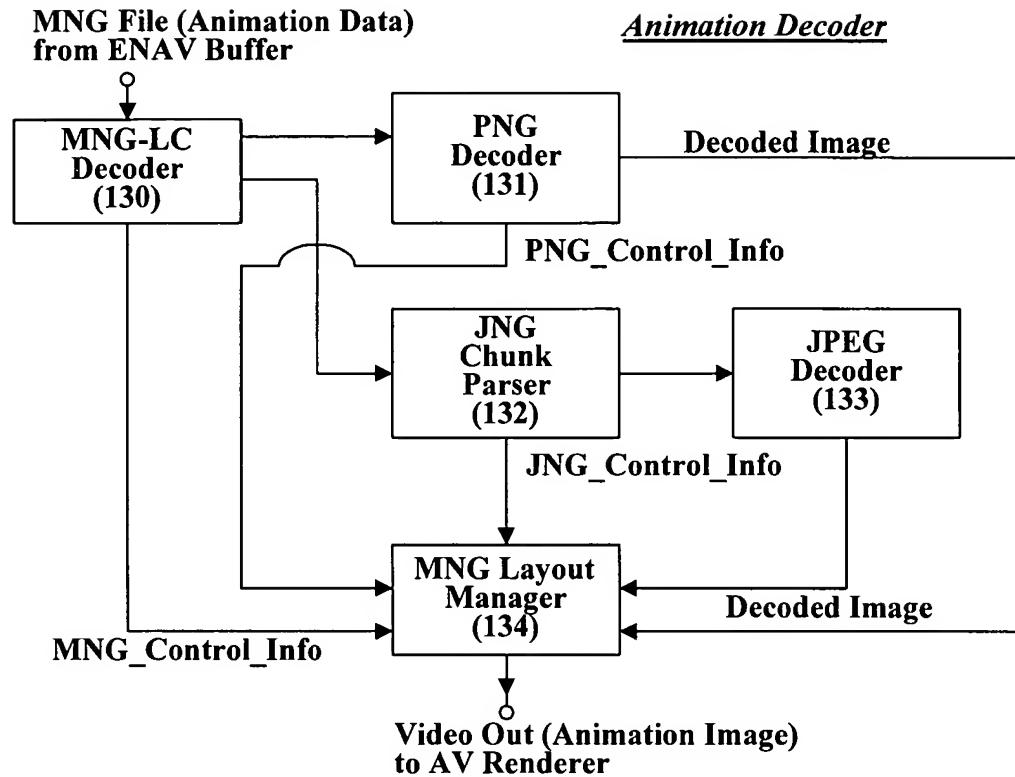


FIG. 4



Critical MNG Control Chunks

FIG. 5

Name	Description	Attribute	Bytes	Value	Comment
MHDR	MNG datastream header	Frame_width	4B	0 to 720	Within NTSC and PAL Note
		Frame_height	4B	0 to 480 (576)	
		Ticks_per_second	4B	Up to 24	
		Nominal_layer_count	4B	-	
		Nominal_frame_count	4B	-	
		Nominal_frame_time	4B	-	
		Simplicity_profile	4B	65 457 473 459 475	MNG-VLC without transparency MNG-VLC MNG-VLC with JNG MNG-LC MNG-LC with JNG
MEND	End of MNG datastream	-	0B	-	Empty chunk

FIG. 6

Critical MNG Image Defining Chunks

Name	Description	Attribute	Bytes	Value	Comment
DEFI	Define an object	Object_id	2B	0x0000	MNG_LC restriction
		Do_not_show	1B	(0x00 visible)	Only one object
		Concrete_flag	1B	0x00	MNG-LC restriction
		X_location	4B	0 to Frame_width	Default is 0
		Y_location	4B	0 to Frame_height	Default is 0
		Left_cb	4B	0 to Frame_width	Default is 0
		Right_cb	4B	0 to Frame_width	Default is Frame_width
		Top_cb	4B	0 to Frame_height	Default is 0
		Bottom_cb	4B	0 to Frame_height	Default is Frame_width
PLTE	Global palette	-	Max (256x3)B	0 to 255	-
tRNS	Global transparency array	-	Max 256B	0 to 255	Note
IHDR/JHDR	-	-	-	-	Same format as PNG IHDR/JNG JDAT
IDAT/JDAT	-	-	-	-	Same format as PNG IDAT/JNG JDAT
IEND	-	-	-	-	Same format as PNG IEND/JNG IEND
TERM	Termination action	Termination_action	1B	0,1,2,3	-
		Action_after_iteration	1B	0,1,2	Must be omitted unless Termination_action is 3
		Delay	4B	-	
		Iteration_max	4B	-	

FIG. 7

Critical MNG Image Displaying Chunks

Name	Description	Attribute	Bytes	Value	Comment
BACK	Background	Red_background	2B	-	-
		Green_background	2B	-	
		Blue_background	2B	-	
FRAM	Frame definition	-	-	-	Follow the MNG-LC version 1.0

FIG. 8

Critical PNG Chunks

Name	Description	Attribute	Bytes	Value	Comment
IHDR	Image header	Width	4B	0 to 720	Within NTSC and PAL
		Height	4B	0 to 480 (576)	Within NTSC (PAL)
		Bit Depth	1B	1,2,4,8,16	-
		Color type	1B	0,2,3,4,6	-
		Compression method	1B	0x00	-
		Filter method	1B	0x00	-
		Interlace method	1B	0x00	No interlace
PLTE	Palette	-	Max (256x3) B	0 to 255	-
IDAT	Image data	-	-	-	Note
IEND	Image trailer	-	0B	-	Empty chunk

FIG. 9

Ancillary PNG Chunks

Name	Description	Attribute	Bytes	Value	Comment
tRNS	Transparency	-	Max 256B	0 to 255	Note 1
gAMA	Image gamma	-	4B	(45455 sRGB)	Note 2
cHRM	Primary chromaticities	White point x	4B	(31270 sRGB)	Note 3
		White point y	4B	(32900 sRGB)	
		Red point x	4B	(64000 sRGB)	
		Red point y	4B	(33000 sRGB)	
		Green point x	4B	(30000 sRGB)	
		Green point y	4B	(60000 sRGB)	
		Blue point x	4B	(15000 sRGB)	
		Blue point y	4B	(6000 sRGB)	
sRGB	Standard RGB color space	-	1B	0,1,2,3	Note 4
pHYs	Physical pixel dimensions	Pixels per unit x	4B	(180,4:3) (135, 16:9)	Note 5
		Pixels per unit y	4B	(160, NTSC) (192, PAL)	
		Unit specifier	1B	0x00	

FIG. 10

Critical JNG Chunks

Name	Description	Attribute	Bytes	Value	Comment
JHDR	JNG header	Width	4B	0 to 720	Within NTSC and PAL
		Height	4B	0 to 480 (576)	Within NTSC (PAL)
		Color type	1B	8,10,12,14	-
		Image_sample_depth	1B	0x08	8bits
		Image_compression_method	1B	0x08	Huffman-coded baseline JPEG
		Image_interlace_method	1B	0x00	Sequential JPEG
		Alpha_sample_depth	1B	0,1,2,4,8,16	-
		Alpha_compression_method	1B	0x08	JDAA format
		Alpha_filter_method	1B	0x00	-
		Alpha_interlace_method	1B	0x00	-
JDAT	Image data	-	-	-	Note
IEND	Image trailer	-	0B	-	Empty chunk

FIG. 11

Ancillary JNG Chunks

Name	Description	Attribute	Bytes	Value	Comment
gAMA	Image gamma	-	4B	(45455 sRGB)	Note 1
cHRM	Primary chromaticities	White point x	4B	(31270 sRGB)	Note 2
		White point y	4B	(32900 sRGB)	
		Red point x	4B	(64000 sRGB)	
		Red point y	4B	(33000 sRGB)	
		Green point x	4B	(30000 sRGB)	
		Green point y	4B	(60000 sRGB)	
		Blue point x	4B	(15000 sRGB)	
		Blue point y	4B	(6000 sRGB)	
sRGB	Standard RGB color space	-	1B	0,1,2,3	Note 3
pHYs	Physical pixel dimensions	Pixels per unit x	4B	(180,4:3) (135, 16:9)	Note 4
		Pixels per unit y	4B	(160, NTSC) (192, PAL)	
		Unit specifier	1B	0x00	

FIG. 12

Table 7.2.1.1-1 : Restriction for JPEG data

Marker	Attribute	Description	Bytes	Value	Comment
SOI	-	Start of image	2B	0xFFD8	
APP0	APP0	Application information start marker	2B	0xFFE0	
	length	length of structure including this field	2B	0x0010	length is fixed to 16 byte
	identifier	Uniquely identify this APP0 marker	5B	JFIF\0	
	version	Current released revision	2B	0x0102	v1.02
	units	Units for X and Y densities	1B	0x00	Pixel aspect ratio
	X density	horizontal pixel density	2B	0x0001, 0x00B4, 0x0087	(1, square pixel) (180, 4:3) (135, 16:9)
	Y density	vertical pixel density	2B	0x0001, 0x00A0, 0x00C0	(1, square pixel) (160, NTSC) (192, PAL)
	X thumbnail	Thumbnail horizontal pixel count	1B	0x00	No thumbnail
	Y thumbnail	Thumbnail vertical pixel count	1B	0x00	
DQT	-	Quantization Table start marker	2B	0xFFDB	
DHT	-	Huffman Table marker	2B	0xFFC4	
SOF0	-	Start of frame – Baseline DCT	2B	0xFFC0	
SOS	-	Start of scan marker	2B	0xFFDA	
EOI	-	End of image	2B	0xFFD9	